CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 86-89
NPDES NO. CA0037800

REISSUING WASTE DISCHARGE REQUIREMENTS FOR:

SONOMA VALLEY COUNTY SANITATION DISTRICT
SONOMA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region, hereinafter called the Board, finds that:

1. Sonoma Valley County Sanitation District, hereinafter called the discharger, submitted a report of waste discharge dated June 20, 1986 for reissuance of NPDES Permit No. CA0037800.

2. The discharger presently discharges an average dry weather flow of 2.7 million gallons per day (MGD) from its secondary treatment plant. The plant is an extended aeration activated sludge system designed for handling an average dry weather flow of 3.0 MGD and a peak wet weather flow of 10.5 MGD. Plant effluent is currently being discharged year round into Schell Slough (Lattitude 38 Deg, 14 Min, 14 Sec.; Longitude 122 Deg, 25 Min, 51 Sec.) , a water of the State and the United States.

3. The Board adopted a revised Water Quality Control Plan (Basin Plan) for San Francisco Bay Region on July 21, 1982. The Basin Plan contains water quality objectives for Schell Slough, Hudeman Slough and their tributaries.

4. The beneficial uses of Schell Slough, Hudeman Slough and their tributaries are:

   a. Recreation
   b. Esthetic enjoyment
   c. Habitat for fish, waterfowl and other aquatic wildlife

5. The Basin Plan prohibits the discharge of wastewater which has characteristics of concern to beneficial uses:

   a. At any point at which the wastewater does not receive a minimum initial dilution of at least 10:1, and

   b. Into any nontidal water or dead-end slough or similar confined water areas or their immediate tributaries. Exceptions can be considered where a discharge is approved as part of a reclamation project.

6. The discharger is presently governed by Waste Discharge Requirement Order No. 81-45. The requirements contain a discharge prohibition from May 1 to November 30 of each year which is currently being violated. This is being modified in the reissued permit to May 1 to October 31.

7. The Sonoma County Board of Directors, on July 28, 1986, approved a project to construct wastewater reclamation and disposal facilities (Resolution 86-1537). The facilities will permit dry season (May 1 to October 31) land containment of treated wastewater effluent in storage reservoirs with wet weather discharge to Schell Slough. A new outfall will be constructed at Hudeman Slough to allow additional wet weather discharge. Wastewater will be reclaimed during the dry season by irrigating vineyards, pastures, and fodder crops. The reclamation project will be regulated by the Board under separate waste discharge requirements.

8. This Order serves as an NPDES permit, adoption of which is exempt from the provisions of Chapter 3 (commencing with Section 21100) of Division 13 of the Public Resources Code (CEQA) pursuant to Section 13389 of the California Water Code.

9. The discharger and interested agencies and persons have been notified of the Board's intent to reissue requirements for the existing discharge and have been provided with the opportunity to submit their written views and recommendations.

10. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that the discharger, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, shall comply with the following:

A. <u>Prohibitions</u>

1. The discharger is prohibited from bypassing or overflowing untreated wastewater to waters of the United States, either at the plant or from the collection systems.

2. The average dry weather flow to the treatment plant shall not exceed 3.0 MGD. The average shall be determined over three dry weather months each year.

3. The discharge of wastewater to Schell Slough and Hudeman Slough is prohibited from May 1 through October 31 of each year. The Executive Officer may authorize discharge prior to October 31 based on a demonstration that early rainfall has produced adequate flushing flow in Schell Slough.

B. Effluent Limitations

1. Effluent discharged shall not exceed the following limits:

Constituent	Unit	Monthly Average	Weekly Average	Daily Maximum	Instantaneous Maximum
a. BOD	mg/l	30	45	60	--
b. Suspended Solids	mg/l	30	45	60	--
c. Oil & Grease	mg/l	10	--	20	--
d. Settleable Solids	mg/l-hr	0.1	--	--	0.2
e. Total Chlorine Residual (1)	mg/l	--	--	--	0.0

(1) Requirement defined as below the limit of detection in standard test methods and is to be met at the Dechlorination Facility.

f. In any representative set of samples, the wastes as discharged shall meet the following limit of quality:

TOXICITY:

The survival of a test organism acceptable to this Regional Board in 96-hour bioassays of the effluent as discharged shall achieve a median of 90% survival for three consecutive samples and a 90 percentile value of not less than 70% survival for 10 consecutive samples.

g. The discharge shall not have pH of less than 6.0 nor greater than 9.0.

2. The waste as discharged, or at some place in the treatment processs, shall meet the following limit of bacteriological quality:

The total coliform bacteria for a median of five consecutive effluent samples shall not exceed a most probable number (MPN) of 23 per 100 milliliters.

3. Representative samples of the effluent shall not exceed the following limits:

Constituent	Unit	6-Month Median	Daily Maximum
Arsenic	mg/l	0.01	0.02
Cadmium	mg/l	0.02	0.03
Total Chromium	mg/l	0.005	0.01
Copper	mg/l	0.2	0.3
Lead	mg/l	0.1	0.2
Mercury	mg/l	0.001	0.002
Nickel	mg/l	0.1	0.2
Silver	mg/l	0.02	0.04
Zinc	mg/l	0.3	0.5
Cyanide	mg/l	0.1	0.2
Phenolic Compounds	mg/l	0.5	1.0
Total Identifiable Chlorinated Hydrocarbons (1)	mg/l	0.002	0.004

(1) Total Identifiable Chlorinated Hydrocarbons shall be measured by summing the individual concentrations of DDT, DDD, DDE, aldrin, BHC, chlordane, endrin, heptachlor, lindane, dieldrin, polychlorinated biphenyls, and other identifiable chlorinated hydrocarbons.

4. The arithmetic mean of the biochemical oxygen demand and suspended solids values, by weight, for effluent samples of wastewater discharged to Schell Slough that are collected in a period of 30 consecutive calender days, shall not exceed 15 per cent of the arithmetic mean of the respective values, by weight, for influent samples collected at approximately the same times during the same period (85% removal).

C. Receiving Water Limitations

1. The discharge of waste shall not cause the following conditions to exist in waters of the State at any place:

   a. Floating, suspended, or deposited macroscopic particulate matter or foam;

   b. Bottom deposits or aquatic growths;

   c. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;

d. Visible, floating, suspended, or deposited oil or other products of petroleum origin;

e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl, or which render any of these unfit for human consumption either at levels created an the receiving waters or as a result of biolagical concentration.

2. The discharge of waste shall not cause the following limits to be exceeded in the waters of the State in any place within one foot of the water surface:

a. Dissolved Oxygen	5.0 mg/l minimum. The median of any three consecutive samples shall not be less than 80% saturation. When natural factors cause lesser concentrations than those specified above, then this discharge shall not cause further reduction in the concentration of dissolved oxygen.
b. Dissolved Sulfide	0.1 mg/l maximum.
c. Un-ionized Ammonia as N	0.025 mg/l annual median 0.4 mg/l maximum
d. Nutrients	Waters shall not contain biostimulatory substances in concentrations that produce aquatic growths to the extent that such growths cause nuisance or adversely affect benificial uses.

3. The discharge shall not cause a violation of any applicable water quality standards for receiving waters adopted by the Board or the State Water Resource Control Board as required by the Clean Water Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 or the Clean Water Act, or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

D. Pond Limitations

1. Wastewater within one foot of the surface of wastewater storage ponds shall meet the following limits at all times:

   a. Dissolved Oxygen — 2.0 mg/l minimum

   b. Dissolved Sulfide — 0.1 mg/l maximum

2. A minimum freeboard of at least 2 feet shall be maintained in the ponds.

3. The ponds shall be protected against erosion, washout and flooding from a flood having a predicted frequency of once in 100 years.

E. Provisions

1. Order No. 81-45 is hereby rescinded.

2. The discharger shall comply with all the sections of this Order immediately upon adoption.

3. The discharger shall comply with the self-monitoring program as adopted by the Board and as may be amended by the Executive Officer.

4. The discharger shall comply with all items of the attached "Standard Provisions, Reporting Requirements and Definitions" dated April 1977 and any amendments thereafter.

5. Where concentration limitations in mg/l are contained in this permit, the following mass emission limitations shall also apply as follows:

   Mass emission limit in lbs/day = Concentration limit in mg/l x 8.43 x Actual flow in MGD averaged over the time interval to which the limit applies.

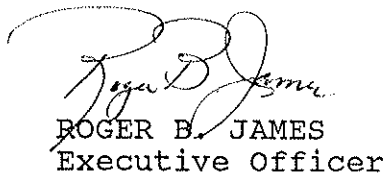
6. The discharger shall review and update by April 15 annually its contingency plan as required by Board Resolution No. 74-10. The discharge of pollutants in violation of this Order where the discharger has failed to develop and/or implement a contingency plan will be basis for considering such discharge a willful and negligent violation of this Order pursuant to Section 13887 of the California Water Code.

7. The discharger shall review and update his Operations and Maintenance Manual annually, or in the event of significant facility or process changes, shortly after such changes have occurred. Annual revisions or letters stating that no changes are needed shall be submitted to the Regional Board by April 15 of each year. A time schedule for completion of the initial revision shall be submitted by May 15, 1987. Documentation of operator input and review shall accompany each annual update.

8. This Order expires November 18, 1991. The discharger must file a report of waste discharge in accordance with Title 23, Chapter 3, Subchapter 9, of the California Administrative Code no later than 180 days in advance of such expiration date as application for issuance of new waste discharge requirements.

9. This Order shall serve as a National Pollutant Discharge Elimination System permit pursuant to Section 402 of the Federal Water Pollution Control Act or ammendments thereto, and shall become effective 10 days after date of its adoption provided the Regional Administrator, Environmental Protection Agency, has no objection. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.

I, Roger B. James, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the Regional Water Quality Control Board, San Francisco Bay Region, on November 19, 1986.



ROGER B. JAMES
Executive Officer

Attachments:
Standard Provisions, Reporting Requirements and Definitions (April 1977)
Self-Monitoring Program

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

FINAL
SELF-MONITORING PROGRAM
FOR

SONOMA VALLEY COUNTY SANITATION DISTRICT
SONOMA COUNTY

NPDES NO. CA0037800

ORDER NO. 86-89

CONSISTS OF

PART A

and

PART B

PART B

I. DESCRIPTION OF SAMPLING STATIONS

A. Influent and Intake

Station	Description
A-001	At any point in the treatment facilities headworks at which all waste tributary to the system is present and preceding any phase of treament.

B. Effluent

Station	Description
ES-001	At any point in the outfall to Schell Slough between the dechlorination facilities and point of discharge.
ES-001-D	At any point in the disinfection facilities for Waste 001 at which point adequate contact with the disinfectant is assured. (May be the same as E-001)
EH-001	At any point in the outfall to Hudeman Slough between storage reservoir R-1 and the point of discharge.

C. Receiving Waters

Station	Description
CS-1	At a point in Schell Slough located at the tide gates upstream from the point of discharge.
CS-2	At a point in Schell Slough located within twenty (20) feet downstream from the discharge.
CS-3	At a point in Schell Slough located five hundred (500) feet downstream from CS-2.
CS-4	At a point in Schell Slough located midway between its confluence with Steamboat Slough and the point of discharge.

CS-5	At a point in Steamboat Slough located at its point of confluence with Schell Slough.
CS-6	At a point in Third Napa Slough located at its confluence with Steamboat Slough.
CH-1	At a point in Hudeman Slough located upsteam from the point of discharge.
CH-2	At a point in Hudeman Slough located within twenty (20) feet downstream from the discharge.
CH-3	At a point in Hudeman Slough located five hundred (500) feet downstream from CH-2.
CH-4	At a point in Hudeman Slough located midway between its confluence with Second Napa Slough and the point of discharge.
CH-5	At a point in Hudeman Slough located at its point of confluence with Second Napa Slough.
CH-6	At a point in Hudeman Slough located five hundred (500) feet east from CH-5.
C-7	At a point in Second Napa Slough located at its confluence with Third Napa Slough.
C-8	At a point in Sonoma Creek located at its confluence with Second Napa Slough.

D. Land Observations

Station	Description
P-1 thru P-'n'	Located at the corners and midpoints of the perimiter fenceline surrounding the treatment facilities. (A sketch showing the locations of these stations will accompany each report.)

E. Sediments

Station	Description
BS-1	At a point in Schell Slough located fifty (50) feet downstream from CS-1.
BS-2	At a point in Schell Slough located at CS-2.
BS-3	At a point in Schell Slough located at CS-4.
BH-1	At a point in Hudeman Slough located fifty (50) feet downstream from CH-1.
BH-2	At a point in Hudeman Slough located at CH-2.
BH-3	At a point in Hudeman Slough located at CH-4.

F. Overflows and Bypasses

Station	Description
OV-1 thru OV-'n'	Bypass or overflows from manholes, pump stations or collection systems.
	Note: Initial SMP report to include map and description of each known bypass or overflow location.

Reporting shall be submitted monthly and include date, time, and period of each overflow or bypass.

II. SCHEDULE OF SAMPLING AND ANALYSIS

A. The schedule of sampling, measurements and analysis shall be that given as Table I. This schedule shall apply only during those times in which discharge to Schell Slough occurs.

III. MODIFICATION OF PART "A"

Exclusions: This SMP does not include the following paragraphs of Part A:

i) C.3
ii) C.5.c

I, Roger B. James, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in this Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirments established in Order No. 86-__.

2. Is effective on the date shown below.

3. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the discharger and revisions will be ordered by the Executive Officer.

ROGER B. JAMES
Executive Officer

Effective Date November 25, 1986

Attachment:
Table I

SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

Sampling Station	A-001		ES-001 EH-001		ES-001-D				All C		All P	All B	All OV
TYPE OF SAMPLE	C-24	Cont	G	C-24	G	C-24			G		O	BS	O
Flow Rate (mg		D											E
BOD, 5-day, 20° C, or COD (mg/l & kg/day)	2/W			2/W									
Chlorine Residual & Dosage (mg/l & kg/day)			CONT ES-001		D								
Settleable Matter (ml/l-hr. & cu. ft./day)			D										
Total Suspended Matter (mg/l & kg/day)	2/W			2/W									
Oil & Grease (mg/l & kg/day) 1/	See Note 1 "Oil and Grease Sample Collection"												
Coliform (Total) (MPN/100 ml) per req't					3/W				M				
Fish Toxicity, 96-hr. % Survival in undiluted waste						M							
Ammonia Nitrogen (mg/l & kg/day)				M					2/Y				
Nitrate Nitrogen (mg/l & kg/day)				M					2/Y				
Nitrite Nitrogen (mg/l & kg/day)				M					2/Y				
Total Organic Nitrogen (mg/l & kg/day)				M					2/Y				
Total Phosphate (mg/l & kg/day)				M					2/Y				
Turbidity (J son Turbidity Units)													
pH (units)			D						M				
Dissolved Oxygen (mg/l and % Saturation)			D						M				
Temperature (°C)			D						M				
Apparent Color (visual)			2W						M				
Secchi Disc (inches)									M				
Sulfides (if DO < 5.0 mg/l) Total & Dissolved (mg/l)			W						M				
Arsenic (mg/l & kg/day)				3M									
Cadmium (mg/l & kg/day)				3M									
Chromium, Total (mg/l & kg/day)				3M									
Copper (mg/l & kg/day)				3M									
Cyanide (mg/l & kg/day)				3M									
Silver (mg/l & kg/day				3M									
[illegible] (mg/l & kg/day)				3M									

P.19

TYPE OF SAMPLE	C-24	Cont	G	C-24	G	C-24			G		O	BS	OV
Mercury (mg/l & kg/day)				3M									
Nickel (mg/l & kg/day)				3M									
Zir (mg & kg/day)				3M									
PHENOLIC COMPOUNDS (mg/l & kg/day)				3M									
All Applicable Standard Observations			D						M		2/W		E
Bottom Sediment Analyses and Observations													
Total Identifiable Chlorinated Hydrocarbons (mg/l & kg/day)				3M									
Rainfall depth and Duration per overflow event													E

LEGEND FOR TABLE

TYPES OF SAMPLES

G = grab sample
24 = composite sample - 24-hour
X = composite sample - X hours (used when discharge does not continue for 24-hour period)
Cont = continuous sampling
DI = depth-integrated sample
BS = bottom sediment sample
O = observation

TYPES OF STATIONS

I = intake and/or water supply stations
A = treatment facility influent stations
E = waste effluent stations
C = receiving water stations
P = treatment facilities perimeter stations
L = basin and/or pond levee stations
B = bottom sediment stations
G = groundwater stations
OV = overflow and bypasses

FREQUENCY OF SAMPLING

E = each occurence
H = once each hour
D = once each day
W = once each week
M = once each month
Y = once each year

2/H = twice per hour
2/W = 2 days per week
5/W = 5 days per week
2/M = 2 days per month
2/Y = once in April and once in October
Q = quarterly, once in March, June, Sept. and December

2H = every 2 hours
2D = every 2 days
2W = every 2 weeks
3M = every 3 month
Cont = continuous

Note 1

OIL AND GREASE SAMPLE COLLECTION

Samples taken for oil and grease analysis at sample station A-001 shall be grab samples, at a frequency of monthly. Samples collected at station ES-001 and EH-001 shall be grab samples taken every two weeks.

Oil and grease sampling shall consist of three grab samples taken at 8-hour intervals during the sampling day, with each grab being collected in a glass container and analyzed separately. Results shall be expressed as a weighted average of the 3 values, based upon the instantaneous flow rates occurring at the time of each grab sample.

If the plant is not staffed 24 hours per day or if the discharge does not occur continuously, then the three grab samples may be taken at approximately equal intervals during the period that discharge is made.

In the event that sampling for oil and grease once every two weeks or less frequently shows an apparent violation of the waste discharge permit 30-day average limitation (considering the results of one or two day's sampling as a 30-day average), then the sampling frequency shall be increased to weekly, so that a true 30-day average can be computed and compliance can be determined. This provision does not apply to cases in which effluent oil and grease limitations are not currently in effect (under a time schedule for compliance).

I, Roger B. James, Executive Officer, hereby certify that the foregoing Self-Monitoring Program addenum:

1. Does not affect any portion of the discharger's current Self-Monitoring Program other than the oil and grease sampling stations named herein.

2. Has been ordered by the Executive Officer and becomes effective immediately.

Roger B. James

ROGER B. JAMES
Executive Officer

Effective Date November 25, 1986